

PORTLAND HARBOR



Stay Informed and Involved

This Community Involvement Plan, or CIP, is EPA, Region 10's, updated strategy for engaging community members in the cleanup of the Portland Harbor Superfund site. The plan also includes Oregon Department of Environmental Quality (ODEQ) engagement efforts.

Activities in this plan will be used to help us remain in regular contact with the community. This plan is the result of feedback from community meetings, interviews and presentations EPA held between 2012-2015.

Our goal is to make sure we consistently provide opportunities for people to share their ideas, concerns and priorities. We look forward to continuing to work with the public in Portland to strengthen healthy communities and advance environmental protection.

EPA and Community Involvement

This Community Involvement Plan is a strategy to help promote meaningful community involvement throughout the cleanup of the Portland Harbor Superfund site. It specifies planned activities for 2015 and beyond. The plan is a working document, updated as more information about the site becomes available.

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The Site: At a Glance

Where Is the Portland Harbor Site?

The study area is a contaminated section of the lower Willamette River from Broadway Bridge upstream to approximately the Columbia Slough.

What Happened?

More than a century of industrial uses left areas of Portland Harbor contaminated with hazardous substances. They include polychlorinated biphenyls (PCBs), heavy metals, polynuclear aromatic hydrocarbons (PAHs), dioxin/furans and pesticides.

Why Are We Cleaning It Up?

The EPA is overseeing studies that look at ways people and wildlife may be exposed to contamination at the site and, if so, whether the possibility of harmful effects is great enough that a cleanup is needed. Based on the studies completed to date, the EPA has determined that risks posed by the site are high enough to take action.

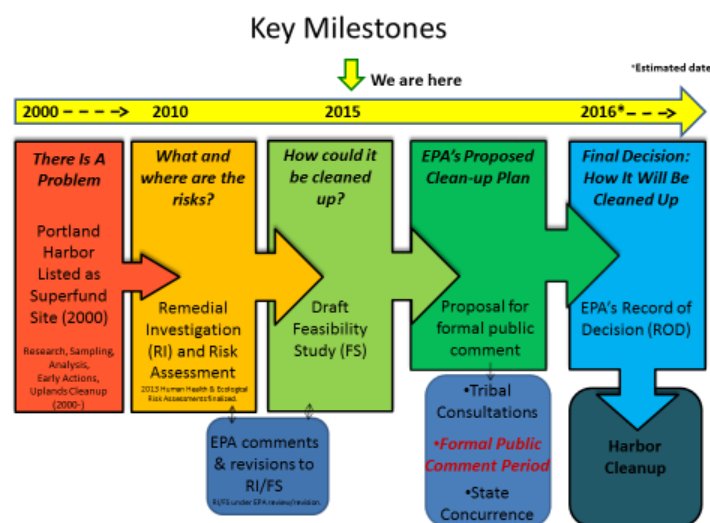
Eating Portland Harbor resident fish such as bass, catfish and carp is a health risk, especially for subsistence fishers and infants breastfed by mothers who eat resident fish. PCBs are the primary contaminant associated with most of the risk from eating the fish. Contamination also poses ecological risks.

What Is Going on Now?

The EPA is reviewing options to clean up contamination in the river and along the shoreline at Portland Harbor. These options are presented in a document called the feasibility study. EPA will use the study to develop a proposed cleanup plan, anticipated in 2016. This proposed plan will outline cleanup options and propose a preferred course of action for cleaning up Portland Harbor. The public will have an opportunity to comment on the draft plan when released in 2016. After carefully considering public input, the EPA will finalize the

draft plan and issue a Record of Decision (ROD) selecting a remedy for the site.

Cleanup of the river will be coordinated with cleanup and pollution control efforts on land-based properties that are sources of river contamination. ODEQ is overseeing these efforts. Until then, the EPA and ODEQ will continue to meet with the public to provide updates, answer questions and listen to community concerns.



What Are the Project's Goals?

- Clean up contaminated sediment. Decrease pollution sources to reduce the risk for people eating resident fish from the lower Willamette River, and for wildlife and fish in the area.
- Provide cleaner habitat for wildlife and fish. Coordinate cleanup actions with habitat restoration projects in the lower Willamette River.
- Allow recreational and other river uses that also continue support navigation, industry, commerce and jobs in Portland Harbor.

EPA and ODEQ Contacts

Contact us if you have questions or need more information about this plan or the Portland Harbor site:

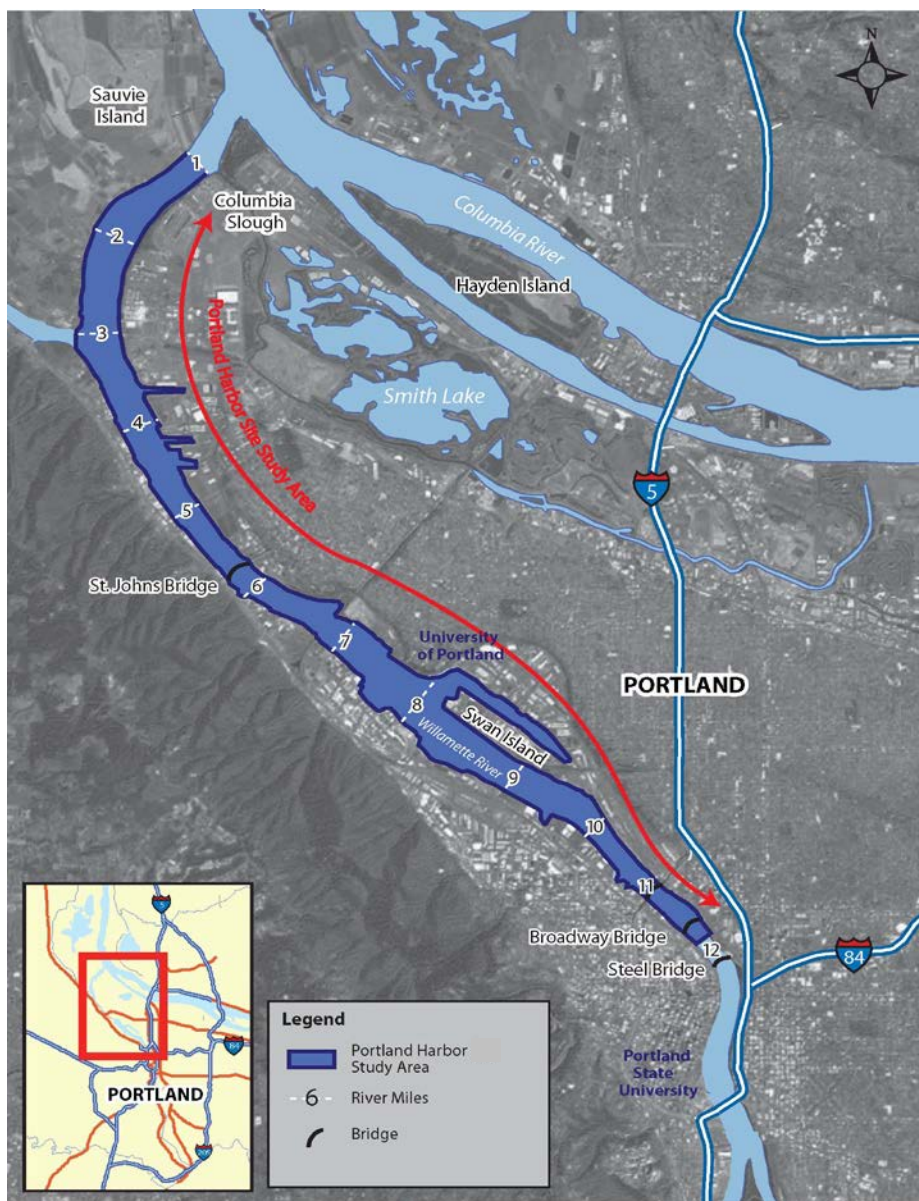
- Alanna Conley, EPA Community Involvement Contact, Portland: (503) 326-6831 | conley.alanna@epa.gov
- Kristine Koch, EPA Lead Project Manager: (206) 553-6705 | koch.kristine@epa.gov
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- Marcia Danab, ODEQ Community Involvement Contact: (503) 229-6488 | danab.marcia@deq.state.or.us
- Matt McClincy, ODEQ Project Manager: (503) 229-6825 | mcclincy.matt@deq.state.or.us

Learn more: Sign up for updates and event notifications at bit.ly/ptlndhrbr.

Visit EPA's web page www.epa.gov/region10/portlandharbor or

Visit ODEQ's web page www.deq.state.or.us/lq/cu/nwr/portlandharbor

Aerial view of the Portland Harbor study area



A Closer Look

The Portland Harbor Superfund site study area is located on the lower Willamette River, between the Broadway Bridge in downtown Portland and the Columbia Slough. The working Portland waterfront is heavily industrialized and zoned primarily for commercial and industrial uses.

In addition to industrial activities, tribal fishing for both subsistence and ceremonial purposes has occurred historically and continues to be a key activity along the river. Other people also use the river for subsistence fishing. *Subsistence fishing* refers to fishing, other than sport fishing, that provides a source of food, up to a substantial source of food for the fisher or the fisher's family. Many fish species such as salmon and steelhead migrate through Portland Harbor and the Willamette River. Unlike migratory fish such as salmon, *resident fish* such as bass, catfish and carp may spend their entire life cycle in Portland Harbor.

Fish-eating birds, migratory waterfowl and raptors seasonally visit the lower Willamette River. Swimming, boating and community recreational events are other uses that bring people in contact with Portland Harbor. Additionally, transient communities have been observed living along some shoreline areas.

In December 2000, the EPA added Portland Harbor to the Superfund program's National Priorities List of contaminated sites based on the results of a 1997 sediment sampling study. The list identifies the nation's most contaminated sites. Hazardous substances currently found at Portland Harbor are harmful to humans, fish and wildlife. The EPA has focused on evaluating the risks posed at the site and determined that there is a risk to public health from eating resident fish. There is also ecological

risk associated with contamination in Portland Harbor.

Since several years prior to the listing, ODEQ has been cleaning up sources of contamination at industrial sites along the banks of the river. The objective of ODEQ's source control work has been to identify, evaluate and control upland sources of contamination that pose a direct risk to river users and to prevent recontamination of any in-river cleanup action. ODEQ's source control work is guided by the December 2005 ODEQ/EPA Portland Harbor Joint Source Control Strategy, available at www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/jointsource.htm.

ODEQ periodically publishes a document describing the status, next steps and schedule for Portland Harbor source control. This document, the Milestone Report – Upland Source Control at the Portland Harbor Superfund Site, is available at www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/jointsource.htm.

In addition to overseeing the Lower Willamette Group's Portland Harbor investigation efforts, the EPA is overseeing a number of in-river Early Actions. A couple of Early Actions have removed contaminated sediment from the river. Other Early Actions at high chemical concentration areas are getting more detailed analysis and information for the feasibility study and design level of work so they could be some of the first areas cleaned up after the final remedy for the site is selected in the Record of Decision. Both ODEQ source control work and the EPA's Early Actions are briefly described in Appendix D of this plan.

For additional background information, please see Appendix G for fact sheets about Portland Harbor.

Community Background

Diverse neighborhoods, organizations, schools, businesses, religious institutions, the University of Portland, and government offices are located within a 5-mile radius of the Portland Harbor site. Distance is based on an polygon area 2.5 miles east and 2.5

miles west of the study area. Approximately twenty-four percent of people living within 5 miles of Portland Harbor are minorities; fifteen percent of homes are non-English speaking households. Area neighborhoods include Spanish-speaking,

Vietnamese, Hmong, Chinese, Ethiopian, Somali and Russian/Slavic communities.

Community Data		
	5-Mile Radius	Portland, Oregon (Multnomah County)
Race % Minority	24%	30%
Race % White	80%	81%
Speak English Only	85%	81%
Non-English Spoken at Home	15%	19%
Age of Population (less than 18 years old)	24%	21%
Education (High School Diploma)	16%	21%
Per Capita Income	\$34,383	\$28,883
Household Income Less Than \$15,000	14%	20%
Title 1 Public Schools	12	14%
Source: Demographic approximations based on <i>U.S. Census Bureau, American Community Survey (ACS) 2006-2010.</i>		

Portland Harbor Community Advisory Group (CAG)

A group of interested citizens and organizations formed a Community Advisory Group, or CAG, for the Portland Harbor site. The Portland Harbor CAG provides a public forum for community members to learn about the site and share community needs and concerns. The CAG also provides input and feedback to EPA Region 10 and ODEQ on how to clean up the

site by offering a valuable opportunity to hear and consider community perspectives on site plans and activities. November 2015, the CAG will have an opportunity to provide written recommendations to the National Remedy Review Board on the clean-up options appearing in the Draft Feasibility Study.

Participate in future Portland Harbor CAG meetings

- Contact CAG Chair Jim Robison at 503-285-4805 or jim@jimrobison.org.
- Attend a CAG meeting held on the second Wednesday of every month at 6:00 p.m. at the Water Pollution Control Laboratory at 6543 North Burlington Avenue, under the St. Johns Bridge. All CAG meetings are open to the public. Sign up to receive email invitations and meeting agendas at bit.ly/ptlndhrbr.

Other Community Partners

We recognize that there are community members and organizations not represented on the CAG. Therefore, it is important that we reach out regularly to others interested in the Portland Harbor site to hear ideas and concerns of representative of the broader community. Some of the community groups that we have connected with include: Communities of Color, Native American Youth Association, Latino Network, Right 2 Dream Right 2 Survive, the Slavic Immigrant Association, Ecumenical Ministries Oregon, the Coalition of Black Men, the Oregon

Environmental Justice Task Force, Oregon Tradeswomen, Iraqi Society, Czech Society, Slavic Immigrant Association (Oregon), League of Women Voters, Verde, Portland Harbor Community Coalition, Sierra Club Portland, Occupy St. Johns, Audobon Society, Asian Pacific American Network of Oregon, Vietnamese Community of Oregon, Portland neighborhood associations such as King, St. Johns, Linton, Friends of Cathedral Park North East and schools, People with Disabilities (access to river). We will also use public information sessions, fact

sheets, websites, one-on-one discussions, and participation in community events as ways to share information with the broader community. We will work hard to make sure these efforts reach historically underrepresented communities. If you are aware of specific community needs near the site, please let the EPA and ODEQ know. We can attend

Willamette Riverkeeper

The Willamette Riverkeeper has been a community resource, sharing information and reaching out to the public about Portland Harbor cleanup activities. The EPA advertised the availability of a technical assistance grant in December 2000 and awarded it to the Willamette Riverkeeper in August 2001. The purpose of the grant is to provide funds for a technical advisor to support the CAG. The advisor

informal meetings, and meet one-on-one to make sure people's concerns are heard and that people are up to date on the site's status. We plan to reach southeast and southwest Portland neighborhoods interested in knowing more about plans for this site. Page nine (pg. 9) provides more information.

helps community members understand scientific and technical information related to the investigation and cleanup of Portland Harbor.

Although not Portland Harbor specific, EPA and ODEQ can provide information on other grant opportunities.

To Learn more about the Willamette Riverkeeper

- Contact Executive Director Travis Williams at 503-223-6418 or travis@willametteriverkeeper.org.
- Visit the organization's website at www.willamette-riverkeeper.org.



Recreational activities at Portland Harbor



Bill Eagan with fish caught from Portland Harbor

What We Have Heard So Far

To make sure EPA Region 10 and ODEQ remain up to date on community concerns and priorities regarding the Portland Harbor site, we participate in and continue to host a series of activities. These venues included Portland Harbor CAG meetings and the CAG's Field Day, neighborhood association meetings, public involvement sessions, focus groups and a community café. We also did a lot of one-on-one outreach, visiting local neighborhoods and meeting with area organizations.

Here is a brief summary of the most common community feedback shared with EPA Region 10 and ODEQ during these activities between 2012-2015.



Community Requests

- Ensure that outreach efforts include underrepresented communities, including houseless populations.
- Provide regular site status updates to communities on upcoming site activities and include community in quarterly briefings with EPA executive/managers.
- EPA host non-technical meetings where people can share their thoughts ask questions and provide input in an informal setting.
- Help identify community demographics and provide maps.
- Hire local residents for cleanup jobs.
- Provide alternative ways for communities to provide input and learn – videos, illustrators, Saturday sessions. Develop multilingual outreach sheet.
- Coordinate the cleanup with efforts to prevent the recontamination of the harbor. Monitor contractors performing cleanup. Citizen committee of “river watchers” – independent oversight by non-profit.
- Ensure a strong cleanup that is protective of fish, wildlife and overall health of river. Don't decrease access areas to the river.
- Request for a health impact assessment.
- Maintain the continued economic viability of the harbor and the Portland metropolitan area.
- Enable educational opportunities for students to learn about the site and its cleanup.
- Hear community concerns to remove contaminated materials from the river to minimize long term risks. Hear community concerns about the use of a confined disposal facility (CDF); and explore alternative treatment technologies.
- Make strong effort to prevent recontamination of the river.
- Make sure the site's responsible parties pay their fair share of the cleanup.
- Provide periodic briefings to the media and local, state and federal elected officials. Give semi-annual presentations on the site's status, milestones and next steps to the Swan Island Business Association.

Community Suggestions

General

- To reach underrepresented communities, translate materials into Spanish, Vietnamese and Russian and share the information using ads in newspapers, public service announcements on the radio and television, and articles in community newsletters.
- Direct community outreach is also effective. Attending community celebrations and ethnic festivals is a good way to reach different communities and neighborhood associations in the area.
- Continue working with local non-profit community organizations and community leaders from culturally diverse groups to help share site information.

For Outreach to Spanish-Speaking Communities

- There is a need for more public awareness regarding the health risk posed by eating resident fish from Portland Harbor. People are catching and eating the fish.
- Information sharing needs to reach families and children. Possible options include passing out information in Spanish in schools, churches and community centers, and placing television commercials on the local Spanish channel and ads in the community outreach section of the *El Latino de Hoy* newspaper. Other options include hosting afterschool programs, providing public service announcements on Radia Latina, providing information during free-lunch-in-the-park programs, the Explorando el Colombia Slough Festival, Portland Sunday Parkways and the Laura Media Health Fair, and working with the Northwest Family Services organization to coordinate meetings and outreach.



For Outreach to Vietnamese Communities

- There is a need for more public awareness regarding the health risk posed by eating resident fish from Portland Harbor. People are catching and eating the fish.
- People are very concerned about their health and being healthy. Outreach should focus on Vietnamese neighborhoods in southeast and southwest Portland, along 82nd Avenue, Powell Boulevard, Division Street, Foster Road and Glisan Street.
- Public notices and warning signs work well. Ads highlighting the fish advisory in the *Phuong Dong Times* newspaper would also work well.

For Outreach to Russian and Slavic Communities

- There is a need for more public awareness regarding the health risk posed by eating resident fish from Portland Harbor. Eastern European groups fish the harbor most heavily on weekends.
- The EPA should work with Orthodox Christian churches in the area and Russian Oregon Social Services on outreach efforts. Attending and sharing information at community festivals is also a good option.

Community Questions and Concerns

The EPA and ODEQ document ongoing community questions and concerns on a regular basis. The agencies will continue to follow up and address them as new site information becomes available and the site's draft Proposed Plan is developed.

- Where and how should contaminated sediments be disposed of?
- How do we inform houseless communities?
- Community members not having the same access to political leaders as industry.
- How do we connect with students to help inform adults?
- Will businesses be able to continue to operate during and after the cleanup?
- How will people know that the fish in the harbor are safe to eat?
- Will the involvement of different government agencies and tribal governments slow down the investigation and cleanup?
- How will agencies post and advertise unsafe conditions?
- How do contaminated sediments affect water quality?
- How much contamination is there; how far does it extend?
- Financial assurance for future monitoring.
- Cleanup decision must survive political appointees.
- Don't destroy habitat areas in expectation of restoration.
- Some members of the community have expressed interest in off-site disposal of contaminated sediments.
- Some community members have expressed concern about PCB volatilization if dredging occurs.
- Some members of the community have asked about the impact of earthquakes on caps placed over contamination and the use of confined disposal facilities.

Community Involvement Objectives

Based on the community feedback EPA Region 10 and ODEQ received between 2012-2015, our goals for the site's updated Community Involvement Plan are to:

- Provide regular and timely information about upcoming cleanup activities and future plans.
- Continue to work with all affected communities and other interested parties, maintaining regular and open dialogue to respond to questions and concerns as they arise.
- Identify and reach out to other communities not represented on the CAG to make sure their voices are heard and partner with ODEQ and Oregon Health Authority to reach historically underrepresented communities.
- Seek resources outside the scope of the Superfund program that may support community objectives.

Community Involvement Activities

The EPA and ODEQ have developed public outreach activities that we plan to use to keep you informed. Audiences for these efforts will include people who may be:

- Affected by environmental impacts or cleanup work in Portland Harbor.
- Involved in site investigation activities or cleanup activities.
- Interested in cleanup work in the harbor or issues related to the Willamette River.
- Part of communities of color, immigrant communities and neighborhoods beyond the site boundary in southeast and southwest Portland.
- Responsible for the general welfare of area communities, businesses, organizations and governments.

How You Can Stay Informed

Review Portland Harbor Reports:

The EPA will make reports, documents and other relevant materials accessible to the public by posting them on the EPA's Portland Harbor website and sending email notification of their availability. EPA Region 10 will also make hard copies available in the Multnomah County Central Library/ St. Johns Library (space permitting) and in EPA's Oregon Operations Office. Copies of reports will also be available on CD-ROMs upon request. Appendix E: Acronyms, and Appendix F: Glossary of Terms, are resources for community use while reading these materials.

Participate During Proposed Plan Public Comment Period:

Comments received by the EPA during public comment period for the Proposed Plan will be shared with project managers and the project team, placed in the administrative record, and addressed in the responsiveness summary included in the ROD. Comments received outside of formal public comment periods will also be shared with project managers and the project team and placed in the administrative record. They will not receive a written response.

Attend and Participate in CAG Meetings:

EPA and ODEQ staff will continue to work closely with the Portland Harbor CAG, attending meetings, providing information and serving as resources to answer community questions. As funding is available, the EPA plans to continue supporting the site's technical assistance grant to provide independent technical review and interpretation of project information for the community.

Invite Us to Your Community Event or Meeting:

EPA and ODEQ staff are available to meet with community members, neighborhood associations and other site stakeholders to discuss the site's status and keep up-to-date on community issues and concerns. We are available to attend regularly scheduled meetings of community groups and neighborhood associations upon request.

Attend Public Information Sessions:

The EPA and ODEQ will continue to host periodic open houses, public information sessions and workshops to help make information widely available at significant milestones during the site's cleanup.

Briefings for Elected Officials:

EPA and ODEQ project managers and staff will routinely brief local, state and federal legislators about progress on the Portland Harbor cleanup. These briefings will provide another way for project information to reach local constituents. In return, legislators will be able to share their constituents' concerns with the EPA and ODEQ.

Contact Us with Questions or Concerns:

Alanna Conley and Marcia Danab are the project's community involvement contacts. They are available to talk with anyone who has concerns or questions about the

Portland Harbor cleanup. They will share the information they gather with the project team.

Where and How You Can Get More Information about Portland Harbor

Fact Sheets:	The EPA and ODEQ will issue periodic fact sheets about cleanup activities, significant milestones, technical information and project findings. The fact sheets will be sent to the Portland Harbor email list (see below) and posted on the EPA and ODEQ Portland Harbor Web pages. Hard copies of fact sheets will be distributed during CAG meetings and provided to community groups and individuals upon request.
Articles and News Releases:	The EPA and ODEQ may periodically submit articles, and provide interviews to trade publications, local newspapers and radio broadcasts. Public notices for submission of public comments on the Proposed Plan will be posted in one or more newspapers. Significant project news and milestones may be shared by EPA public affairs offices with Portland media outlets.
Portland Harbor Email List:	Site agencies will maintain and regularly update their respective Portland Harbor email lists to make sure stakeholders and neighbors receive information updates. To join the email list, please send a request by email, phone or mail to the EPA or ODEQ contacts listed on page 2. Contact the EPA if you should need printed copies.
Information Repositories:	Reports, technical documents and other information requested from the EPA and ODEQ can be delivered to Multnomah County Central Library or the St. Johns Library (503) 988-5123 for public review, <u><i>Space permitting.</i></u> If the libraries are unable to accept a copy of the document, EPA will work with the community to locate alternate viewing areas.
Websites:	The EPA and ODEQ maintain project websites where people can access site information. To access the EPA Portland Harbor website, visit www.epa.gov/region10/portlandharbor . To access ODEQ's website, visit www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/index.htm .

Reaching Diverse Communities

Outreach to Diverse Communities:	<p>Reaching historically underrepresented communities near the site whose residents may not attend CAG and other site meetings is a priority. To make sure we do so, the EPA and ODEQ will continue to host and participate in discussions and partner with the Oregon Health Authority to help identify the needs, concerns and priorities of these communities. In addition to measures outlined elsewhere in this document, we will continue to make special efforts to reach the following groups in affected communities:</p> <ul style="list-style-type: none"> • <i>Subsistence fishers:</i> We will continue to work with the Oregon Health Authority and the Willamette Riverkeeper to develop and post signs near boat launches and in community parks, have interagency information booths at local events, and provide multilingual information about the site and health risks from eating resident fish. • <i>Non-English speaking groups:</i> If you need site information translated into other languages, please let us know. We are able to provide materials in Chinese, Russian, Spanish, Hmong, Vietnamese and other languages upon request.
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- *Houseless populations:* We will continue to jointly work with State and County agencies, the City of Portland and non-profit groups to improve outreach to citizens living along the river.
- *Tribal populations:* We will work with tribal governments to identify specific tribal information and education needs and share project updates. We are available to participate in meetings, provide presentations and participate in events. We are also reaching out to non-federally recognized tribal communities.
- *Neighborhoods southeast and southwest of the site:* We will be conducting outreach to discuss the importance of the site's cleanup with area residents.

**Community
Involvement Plan
Review:**

We will ask for feedback on our community involvement efforts through public information sessions and comments received by email and phone. The EPA will update the Community Involvement Plan over time as needed.

Community Outreach and Involvement Activities from 2015 and Beyond (estimated dates)*	
Ongoing	Participation in monthly CAG meetings, neighborhood association meetings and presentations to community groups upon request.
	Responding to information requests from residents.
	Attending community festivals and other outreach events.
	Meeting with community groups as requested.
	Providing updates during Oregon Environmental Justice Task Force meetings.
	Updating and involving project partners – local, state and federal agencies and tribal governments.
	Quarterly EPA Community Partner briefings with Region 10 Regional Administrator
	ODEQ source control video released. Presentations to CAG and during other community meetings/events.
Winter 2015 - Spring 2016 Pre-Proposed Plan EPA engagement activities	Community Café: facilitated workshops for community networking around values, and considerations for proposed plan comments.
	Information series with community members to discuss Draft Final Feasibility Study sections.
	Technology talks: Series of discussions on technologies evaluated in Final Feasibility Study to reduce risk from contaminated sediment (presentation and narrated powerpoint)
	Technical assistance information sessions for CAG/TAG contractor for preparing National Remedy Review Board recommendations
	Activities and discussion of health risk and Portland Harbor with youth from schools and afterschool programs with students and tribal youth from families who may substance fish from the river.
	Site update presentation to Swan Island Business Association.

	Educational activities with students in NAYA afterschool program.
	Translated materials provided to Spanish, Russian, and Asian Communities on Portland Harbor status and engagement opportunities.
	Revised Community Involvement Plan provided for public review, posted on site Web page, sent to site email list, and shared with community partners and tribal governments.
	Draft Final Feasibility Study made available to public.
	Meetings with Non-profit organizations to discuss updates, grants and EJ expectations.
	Quarterly training session with Oregon Tradeswomen students seeking to participate in the Superfund jobs readiness program.
	Update presentations to the Oregon EJ Task Force and request for assistance in reaching diverse communities.
	Assistance to CAG: forum to include discussion with elected officials. January – March 2016. Contribute article to CAG newsletter bimonthly.
	Early spring – information sessions on public comment and process for submitting comments.
Spring 2016 Proposed Plan Period– EPA Community Engagement	Announcement of Proposed Plan availability via local newspapers, neighborhood newspapers, EPA mail list, postal mailing, EPA website.
	Draft Proposed Plan released for public review. Plan will be available via public library, CD-ROMs, and EPA web site.
	Four public information sessions - Proposed Plan overview and instructions for submitting public comments.
	Public comment period on the draft Proposed Plan. (30-60 Days)
	Federally recognized Tribal consultation on Proposed Plan.
Summer-Fall 2016	EPA provides response to proposed plan comments. Comments and responses become a part of the administrative record.
Winter 2016 - 2017	EPA prepares Record of Decision (ROD)
2017 and Beyond	ROD provided for public review, posted on site Web page, sent to site email list, and shared with community partners and tribal governments.

	Public meetings and community presentations on the ROD.
	Notifications of ROD availability published in in local media.
	Public information session on ROD.
	Remedial design and remedial action.
	Update to CIP.



EPA community involvement activities for the Portland Harbor site included site tours and information booths at community events.

Project Roles and Responsibilities

Site Agencies

The EPA and ODEQ signed a Memorandum of Understanding in February 2001 to work collaboratively on the cleanup of the Portland Harbor site. The EPA is responsible for investigation and cleanup of contaminated sediments in the river. ODEQ is the lead agency for investigating and controlling upland sources of contamination threatening the river. ODEQ is also responsible for coordinating the Portland Harbor work with other state and local efforts such as the Governor's Oregon Plan and the City of Portland Combined Sewer Overflow (CSO) project. The Oregon Health Authority works with the EPA and ODEQ to explain site health risks to the public. The organization also collaborated with the EPA to develop new fish advisory signage.

Regulatory Overview

The EPA and ODEQ's work in Portland Harbor is governed by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 as well as the State of Oregon's Environmental Cleanup Law (Oregon Revised Statutes 465-200 et. seq.), the Clean Water Act, the Endangered Species Act, and other applicable laws and regulations.

Portland Harbor Natural Resource Trustee Council

EPA Region 10 and ODEQ are also part of a larger intergovernmental project team that includes natural resource trustee organizations designated by law to act on behalf of the public or tribes to protect natural resources such as salmon, migratory birds and their habitat. To coordinate their damage assessment and restoration planning actions, the Trustees for Portland Harbor natural resources formed the Portland Harbor Natural Resource Trustee Council in 2002.

The trustees involved in the Portland Harbor project include the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, the Oregon Department of Fish and Wildlife and six tribal governments. The tribal governments are the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of Siletz Indians, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Nez Perce Tribe.

The tribal governments have expressed interest in the Portland Harbor work because of:

- Treaty rights that provide access to the river's resources.
- Historical use of the area for fishing and cultural purposes.
- Importance of fish and lamprey eel for sustenance and ceremonial purposes.
- Their roles as natural resource trustees charged with protection of fish and wildlife.

The Confederated Tribes and Bands of the Yakama Nation withdrew from the Portland Harbor Natural Resource Trustee Council in June 2009 over whether, how and when to address potential harm to juvenile salmon, other fish and natural resources in the Columbia River caused by Portland Harbor releases. The Yakama Nation continues to be actively involved in Portland Harbor cleanup matters and is working to settle natural resource damage liability, specifically in the Columbia River.

The relationship and responsibilities of the intergovernmental project management team are also established in the site's February 2001 Memorandum of Understanding. The Memorandum is available at the EPA and ODEQ websites or upon request from the agencies.

This Community Involvement Plan serves as a basis for providing information to affected tribal community members. EPA and ODEQ staff will continue to work with the tribal members of the intergovernmental project team to identify the specific needs of tribal members. Both the EPA and ODEQ have obligations to consult with tribal governments on a government-to-government basis, and the EPA has a trustee responsibility to the tribes as a federal agency. Community outreach activities are separate from trustee responsibilities and consultation between governments.

Potentially Responsible Parties

The Lower Willamette Group is a coalition of Portland Harbor businesses and public agencies who stepped forward in 2001 to participate in site investigations. The members of the Lower Willamette Group and the EPA have a legal agreement called an *Administrative Settlement Agreement and Order on Consent*, and a *Statement of Work* that outline: (1) how a remedial investigation and feasibility study will be prepared; (2) who will perform the work; and (3) how the EPA will recover costs incurred by the EPA and ODEQ. To date, the EPA has identified about 150 parties that are potentially responsible for site cleanup costs. Once a cleanup plan is in place, EPA Region 10 will request that the potentially responsible parties negotiate an agreement to fund and implement the site's cleanup.

Working Together for Cleanup



EPA Region 10

Cleanup of Willamette River sediments



ODEQ

Cleanup of upland sites



Oregon Health Authority

Communicating public health risks



Lower Willamette Group and
Other Responsible Parties

Remedial investigation and feasibility
study; site cleanup costs



Portland Harbor CAG

Community forum for education,
information sharing, input into site
decision-making



Portland Harbor Natural
Resource Trustee Council

Natural resource damage assessment
and restoration planning



What's Next in the Cleanup Process

The remedial investigation and feasibility study (RI/FS) for the Portland Harbor site is nearing completion. This stage of the Superfund process identifies the locations, types and amounts of contamination in the harbor. The Lower Willamette Group submitted the site's RI Report to the EPA in October 2009. The site's draft FS Report was submitted to the EPA in March 2012. The report includes ecological and human health risk assessments looking at the risks posed to people, fish, wildlife and plants by contaminated sediment at the site. The EPA is currently reviewing the draft FS Report.

EPA will use the RI/FS reports to help prepare a proposed plan to clean up Portland Harbor. The Proposed Plan will summarize cleanup alternatives and propose a preferred course of action. The EPA will ask for public comments on the Proposed Plan. Tribal consultations and a review by ODEQ will also take place.

After carefully considering public input on the Proposed Plan, the EPA will issue a Record of Decision (ROD) for Portland Harbor. The EPA will then negotiate with the site's potentially responsible parties to design and put the selected remedy in place.

ODEQ is the lead agency overseeing Portland Harbor upland source control. The objective of upland source control is to identify, evaluate and control sources of contamination that threaten the river in the Portland Harbor study area. ODEQ's goal is to control the major sources by the time of the Portland Harbor ROD, particularly so that the sources do not pose a threat of recontaminating in-river cleanup actions. ODEQ will continue to work with upland responsible parties to control sources through the Proposed Plan, ROD and beyond.

The table on pages 12 and 13 provides dates and timeframes for upcoming EPA site activities and milestones.

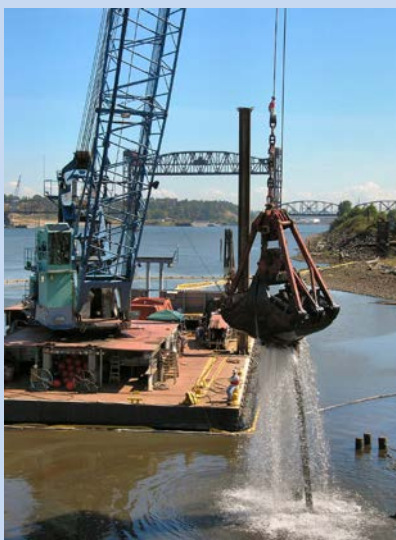
The Feasibility Study

The Feasibility Study outlines the different methods available for sediment cleanup and describes a wide range of ways to combine those methods into cleanup alternatives.

Methods to clean up contaminated sediment include:

- Digging it up (dredging).
- Covering it with clean soil (capping).
- Treating it in place (in-situ treatment).
- Allowing cleaner upriver sediments to cover it up (natural recovery).

Dredging



Capping



You can review the draft FS Report at the Multnomah County Central Library or online at www.epa.gov/region10/portlandharbor.

**Note Taking Page for Your Thoughts
(issues, concerns and priorities to share with EPA Region 10 and ODEQ)**

Appendix A: Superfund Community Involvement Activities

The activities proposed in this Community Involvement Plan for Portland Harbor include public involvement requirements established by law or regulation for all Superfund sites. The information in this appendix has been included as a helpful reference. The citation at the end of each paragraph uses the following abbreviations:

- NCP: National Contingency Plan
- CERCLA: Comprehensive Environmental Response, Compensation and Liability Act (Superfund)
- CFR: Code of Federal Regulations

The numbers and letters in parentheses indicate the chapter, section and paragraph where this information originates. People can request copies of these laws and regulations from any EPA office.

Upon Completion of the Feasibility Study and Proposed Plan

Site Activity: RI/FS and Proposed Plan Notification and Analysis

Minimum Requirements: The lead agency must publish a notice of the availability of the RI/FS and Proposed Plan, including a brief analysis of the Proposed Plan, in a major local newspaper of general circulation. The notice also must announce a comment period.

Reference: SARA 117(a) and (d); NCP 40 C.F.R. 300.430(f)(3)(i)(a)

Site Activity: Public Comment Period on RI/FS and Proposed Plan

Minimum Requirements: The lead agency must provide at least 30 days for the submission of written and oral comments on the Proposed Plan and supporting information available in the administrative record, including the RI/FS. The agency will extend this comment period by a minimum of 30 additional days upon timely request.

Reference: SARA 113(k); NCP 40 C.F.R. 300.430(f)(3)(c)

Site Activity: Public Meeting

Minimum Requirements: The lead agency must provide an opportunity for a public meeting regarding the Proposed Plan and supporting information at or near the site during the comment period.

Reference: SARA 113 and 117(b); NCP 40 C.F.R. 300.430(f)(3)(i)(D)

Site Activity: Meeting Transcript

Minimum Requirements: The lead agency must have a court reporter prepare a publicly available meeting transcript.

Reference: SARA 117(a)(2); NCP 40 C.F.R. 300.430(f)(3)(i)(E)

Site Activity: Revised Proposed Plan and Public Comment

Minimum Requirements: If the agency's proposed decision is significantly revised, and upon the lead agency's determination that the public could not have reasonably anticipated such changes based on the information available in the proposed plan or the supporting analysis and information in the administrative record, the agency must issue a revised Proposed Plan that includes a discussion of the significant changes and the reasons for such changes. The Agency must seek additional public comment on the revised Proposed Plan.

Reference: NCP 40 C.F.R. 300.430(f)(3)(ii)(B)

After the Record of Decision (ROD) Is Signed

Site Activity: ROD Availability and Notification

Minimum Requirements: The lead agency must make the ROD available for public inspection and copying at or near the site prior to the commencement of any remedial action. In addition, the lead agency must publish a notice of the ROD's availability in a major local newspaper of general circulation. The notice must state the basis and purpose of the selected action.

Reference: NCP 40 C.F.R. 300.430(f)(6)

Site Activity: Revision of the Community Involvement Plan

Minimum Requirements: Prior to the remedial design, the lead agency should revise the CIP, if necessary, to reflect community concern, as discovered during interviews and other activities, that pertain to the remedial design and construction phase.

Reference: NCP 40 C.F.R. 300.435(c)(1)

Remedial Design

Site Activity: Fact Sheet and Public Briefing

Minimum Requirements: Upon completion of the final engineering design, the lead agency must issue a fact sheet and provide a public briefing, as appropriate, prior to beginning remedial action.

Reference: NCP 40 C.F.R. 300.435(c)(3)

Appendix B: The Superfund Process



Source: www.epa.gov/superfund/community/process.htm

Action	Status	Description
Preliminary Assessment / Site Investigation (PA/SI)	√	Initial investigations of site conditions.
NPL Listing	√	Placement of site on the EPA's list of the most serious hazardous waste sites identified for long-term cleanup under Superfund.
Remedial Investigation / Feasibility Study (RI/FS)	Draft and Draft final reports provided to the public in 2012 and 2015.	Studies to determine the nature and extent of contamination.
Proposed Plan and Public Comment Period	Spring 2016* (anticipated)	Document summarizing proposed site remedy. EPA solicits public comments, minimum of 30 day comment period, EPA responds to comment, comments and responses become part of the Administrative Record for the site.
Record of Decision (ROD)	After proposed plan 2017*(anticipated)	Decision document selecting site remedy.
Remedial Design / Remedial Action (RD/RA)		Preparation and implementation of plans and specifications for site remedies.
Construction Completion		Completion of physical cleanup construction (cleanup may remain ongoing).
Post-Construction Completion		Activities ensuring Superfund response actions provide for long-term protection of human health and the environment.
NPL Deletion		Removal of site from NPL once all response actions are complete and all cleanup goals achieved.
Reuse		Return of site properties to safe and productive use following cleanup.

Appendix C: Area Context and History

The city of Portland is located in Multnomah County, Oregon. About 15 percent of the state's population – 584,000 people – lives in Portland. The Portland metropolitan area has a population of about 2.3 million.

Historically, the area's economy focused on the harvest of fish, timber, minerals and agricultural products. The principal industries of the Portland metropolitan area are now manufacturing, tourism, transportation, and wholesale and retail trade.

Portland Harbor is one of the busiest seaports on the Pacific Coast. Since the mid-1800s, when the first wharves began supporting international and intercoastal steamship service, the shoreline of the river near Portland has been altered for urban development and a growing shipping industry. The first dredging of the river took place in 1968. Since that time, the Willamette River has been dredged regularly for navigation and maintenance.

The Willamette River

The Willamette River runs through the middle of Portland, flowing north through the city to where it joins the Columbia River. The shoreline has steep banks, many covered with riprap or constructed bulkheads. Many piers and wharves extend out over the water. To accommodate shipping, the river has been extensively dredged. Channel depths currently range from 10 to 140 feet, with an average depth of 45 feet. As the river flows through Portland, it is deep and slow moving, and the water level rises and falls from tidal influence.

The Port of Portland is a hub for goods importing and exporting in the region. Past and present industrial operations in Portland Harbor include:

- Marine construction
- Bulk petroleum product storage and handling
- Construction material manufacturing
- Oil fire-fighting training activities
- Oil gasification plant operations
- Pesticide and herbicide manufacturing
- Wood treating operations
- Agricultural chemical production
- Battery processing
- Liquid natural gas plant operations
- Hazardous waste storage
- Chlorine production
- Ship loading and unloading
- Ship maintenance, repair and refueling
- Rail car manufacturing
- Metal scrapping and recycling

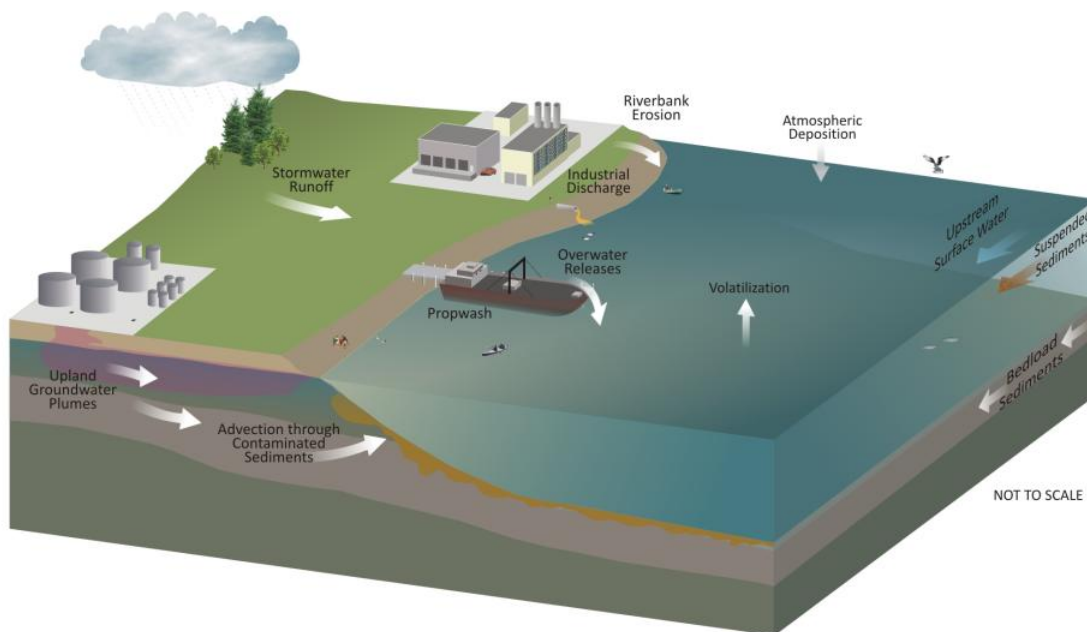


In addition to the major industrial activities along the river and in Portland Harbor, other equally important uses benefit the region. Recreational users boat and swim in the area. Recreational and subsistence fishing takes place in the harbor and up and downstream. Tribal fishing for both subsistence and ceremonial purposes continues to be a key activity. Recent studies identified many species of fish and wildlife species using Portland Harbor and the Willamette River as a migratory pathway, including threatened and endangered runs of salmon. Fish-eating birds, migratory waterfowl and raptors seasonally visit the lower Willamette River and Spring Chinook support sport and recreational fishing.



Aerial view of Portland Harbor in 1921

The Willamette River was used historically for transportation, water supply and waste disposal. Disposal of raw sewage and waste degraded water quality. By the 1920s, water pollution made the water unsafe for human use and toxic for wildlife. In the 1950s, the City of Portland put a sewage management plan in place to minimize the discharge of raw sewage into the river. Other cleanup activities in Portland Harbor and surrounding portions of the Willamette River have been ongoing since the early 1970s. There were controls placed on industrial discharges and municipal waste disposal facilities built throughout the Willamette Basin. Today, these environmental cleanups, controls and regulations have either eliminated or greatly reduced the number of contaminant discharges to the river and the mass of contamination reaching the river.



Appendix D: Cleanup Work to Date

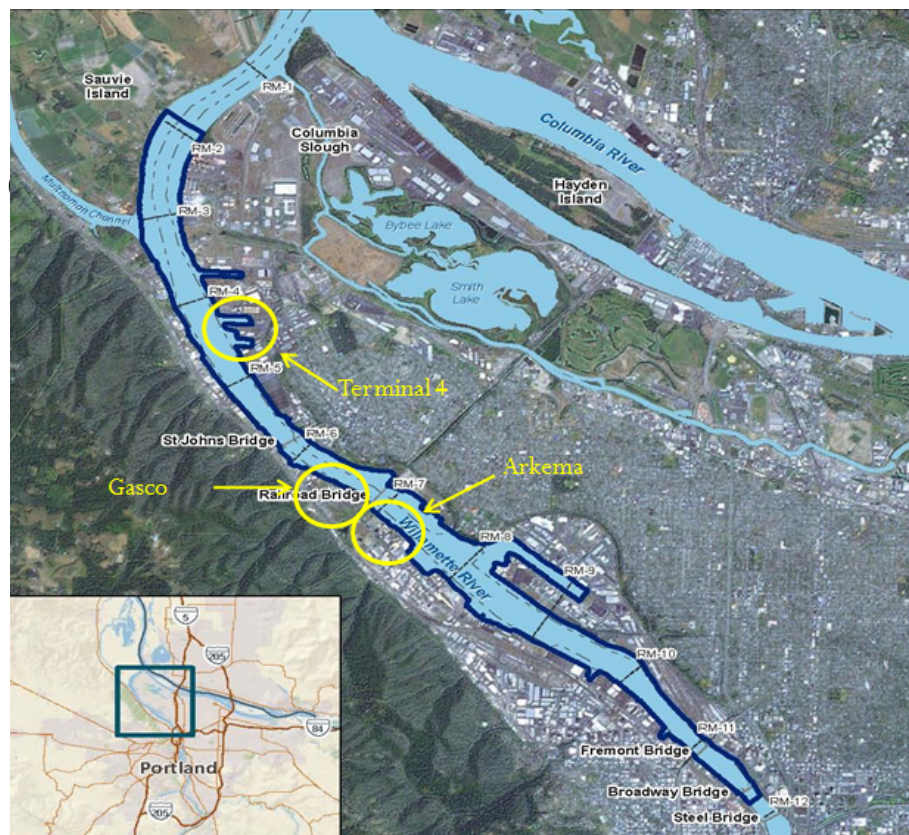
Cleanup of several areas is already underway. Some of these cleanup activities are complete.

Early Action Cleanup Areas

Early action cleanup areas are parts of the Portland Harbor Superfund site that have high concentrations of hazardous substances. Although cleanup activities have already begun in these areas, they will be included in the Sitewide cleanup plan for the river. EPA plans to sequence these areas for high priority starts in the site wide cleanup plan.

- **River Mile 11 East** – EPA entered into a settlement agreement in April 2013 with several potentially responsible parties to conduct additional investigations along a section of Portland Harbor known as River Mile 11 East (11E). This area is generally located between the Fremont and Broadway Bridges on the east side of the Willamette River. Previous studies show this area has elevated concentrations of PCBs and other contaminants. The purpose of the supplemental remedial investigations for River Mile 11E is to obtain additional information needed to select and design the cleanup remedy for this section of the Portland Harbor site. The intent is to begin cleanup of River Mile 11E and other hot spots (areas with elevated contaminant concentrations) such as Arkema and Gasco-Siltronic before starting cleanup of the rest of the Superfund site.
- **Arkema** – Former pesticide manufacturing facility contaminated with high levels of DDT and other chemicals. An early action is underway to address this "hot spot" in Portland Harbor. The EPA is also evaluating a draft alternatives analysis for this area for inclusion in the feasibility study and proposed plan.
- **Gasco-Siltronic** – Former manufactured gas plant contaminated with tar deposits from past manufacturing. Removal of tar deposits in the river (see picture to the right) finished in fall 2005. The EPA is evaluating a draft alternatives analysis for this area for inclusion in the feasibility study and proposed plan.
- **Terminal 4** – Former industrial site contaminated with pesticides, PCBs, metals and PAHs. These contaminants are the focus of the early action cleanup. Phase I of dredging in slip 3 and cleanup of Wheeler Bay was completed in 2008. An alternatives analysis developed during the early action, including the 60 percent confined disposal facility design, are being included in the feasibility study and will be part of the proposed plan for public comment. Phase II of the Terminal 4 cleanup will take place after issuance of the site's Record of Decision.
- **Triangle Park** – A 35-acre former industrial site with soil and low-level, limited ground water contamination. The University of Portland signed an agreement with the EPA in 2008 to clean up the area as part of its plans for new athletic facilities and trails. The University completed the removal action under EPA oversight and approval. Work began in late summer 2012 and finished in winter 2013. Contaminated soil removed from the entire length of the shoreline was placed on the future location of a baseball field, where it will be capped as part of the ballfield's construction. Some soil was removed and disposed of at an approved off-site disposal facility. Residential development and ground water use at the site are restricted. Institutional controls will also be put in place to ensure that future site users are aware of contamination left on site and take proper precautions to limit exposure.
- **U.S. Moorings** – A former industrial site contaminated with metals, solvents and petroleum byproducts from boat maintenance activities. The feasibility study for the site's cleanup was completed in 2012. The U.S. Army Corps of Engineers, the site's owner, will implement a removal action to address the potential for contaminated soil to migrate from the site via stormwater runoff. No other actions are likely in the uplands.





Other Sites

Beginning in the late 1980s, ODEQ's cleanup program began working with parties associated with known releases to Portland Harbor, providing oversight of investigation and cleanup activities at industrial sites along the banks of the river. ODEQ has continued this work from the December 2000 listing to the present. The objective of ODEQ's source control work has been to identify, evaluate and control upland sources of contamination that pose a direct risk to river users and to prevent recontamination of any in-river cleanup action. ODEQ's source control work is guided by the December 2005 ODEQ/EPA Portland Harbor Joint Source Control Strategy, available at www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/jointsource.htm.

At the BP (ARCO) site, for example, ODEQ worked with responsible parties to clean up petroleum contamination from a storage and transport facility. The primary threat from the site was contamination of the Willamette River via ground water migration. Cleanup started in May 2007 and finished in November 2008. ODEQ also periodically publishes a document describing the status, next steps and schedule for Portland Harbor source control. This document, the Milestone Report – Upland Source Control at the Portland Harbor Superfund Site, is available at www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/jointsource.htm.

The EPA listed two other sites – the McCormick and Baxter and Gould sites – on the Superfund program's National Priorities List. The EPA and ODEQ worked cooperatively on site investigations and cleanup.

- **McCormick and Baxter Superfund site** – Former wood treating facility located on the northeast shore of the Willamette River in north Portland. Over the last 15 years, the EPA and ODEQ and agency partners have cleaned up the site and are supporting its return to productive use.

- **Gould Superfund site** – Former lead-acid battery recycling, lead smelting and refining and lead oxide production facility near the Willamette River. Cleanup of contaminated sediment and waste material finished in 2002.

Portland Harbor: Fish Consumption Advisory

Although we work and recreate along Portland Harbor, the primary way people are exposed to contamination from the site is by eating fish such as bass, catfish and carp. These fish, called resident fish, carry levels of chemical contaminants that may cause cancer or developmental problems. PCBs are the primary contaminant associated with most of the risk from eating resident fish. Young children, nursing infants and babies in the womb are the most sensitive to the chemicals: mothers and children should avoid eating Portland Harbor resident fish. For fish advisory information, visit www.healthoregon.org/fishadv or call (877) 290-6767.

FISH ADVISORY

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Fish from these waters may be harmful to eat, especially for children, pregnant or nursing women, and women of childbearing age.





SALMON



STEELHEAD





BASS



CATFISH



CARP

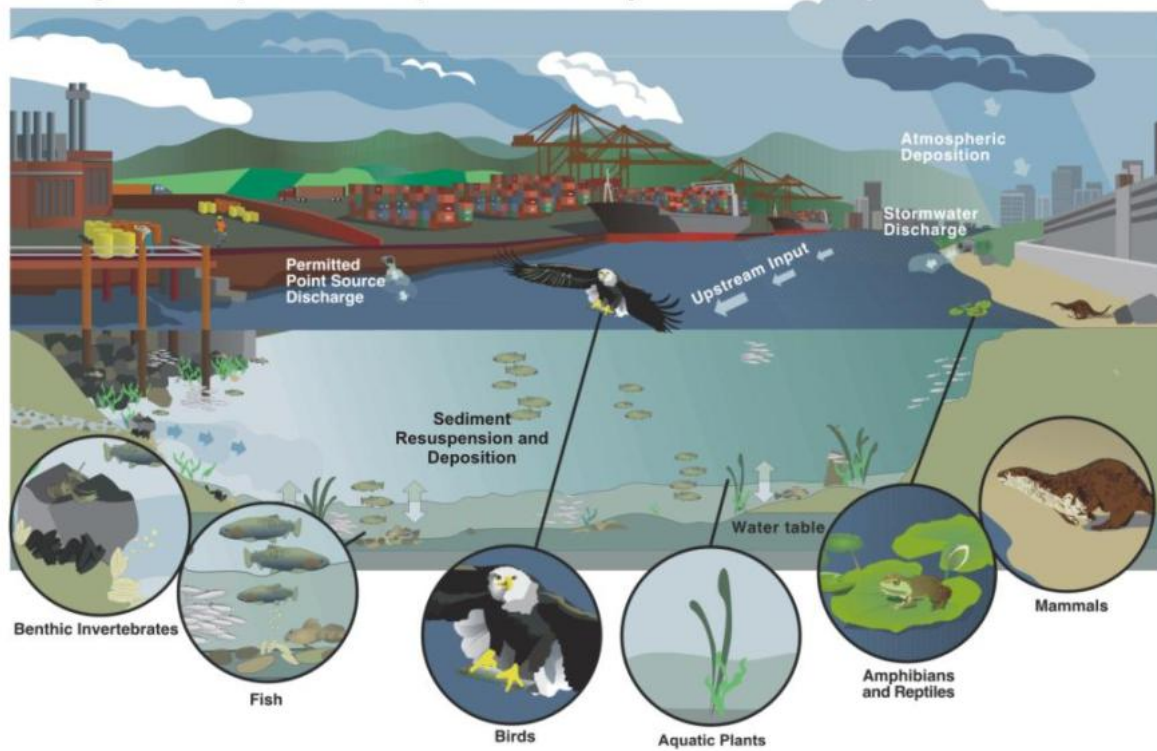


More information call 1-877-290-6767

www.healthoregon.org/fishadv



Portland Harbor Superfund Site Illustration of Ecological Receptors and Exposure Pathways



Appendix E: Acronyms

AET	Apparent Effects Threshold	ESA	Endangered Species Act
AML	Arc Macro Language	ESU	Evolutionarily Significant Unit
ANOVA	Analysis of Variance	FDA	U.S. Food and Drug Administration
ARAR	Applicable or Relevant and Appropriate Requirement	GIS	Geographic Information System
ARL	Acceptable Risk Level	HEAST	Health Effects Assessment Summary Table
AST	Aboveground Storage Tank	HI	Hazard Index
B-COC	Bioaccumulative Chemical of Concern	HPAH	High Molecular Weight Polycyclic Aromatic Hydrocarbon
BMP	Best Management Practice	HW	Hazardous Waste
BRI	Benthic Response Index	IMMP	Inspection, Maintenance and Monitoring Plan
BSAF	Biota-Sediment Accumulation Function	ITI	Infaunal Trophic Index
BT	Bioaccumulation Trigger	IRIS	Integrated Risk Information System
CAS	Chemical Abstract Service	IT IS	Integrated Taxonomic Information System
CBR	Critical Body Residue	ITM	Inland Testing Manual
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	LDR	Land Disposal Restriction
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System	LNAPL	Light Non-Aqueous Phase Liquid
CFR	Code of Federal Regulations	LOAEL	Lowest Observed Adverse Effect Level
COI	Contaminant of Interest	LPAH	Low Molecular Weight Polycyclic Aromatic Hydrocarbon
COPC	Contaminant of Potential Concern	LSD	Least Significant Difference
CPEC	Contaminant of Potential Ecological Concern	LUST	Leaking Underground Storage Tank
CPF	Cancer Potency Factor	MCLG	Maximum Contaminant Level Goal
CSF	Cancer Slope Factor	MCL	Maximum Contaminant Level
CSO	Combined Sewer Outflow	NAPL	Non-Aqueous Phase Liquid
CWA	Clean Water Act	NCP	National Contingency Plan
DDD	Metabolite of DDT	NFA	No Further Action
DDE	Metabolite of DDT	NMFS	National Marine Fisheries Service
DDT	Dichlorodiphenyltrichloroethane	NOAA	National Oceanic and Atmospheric Administration
DMEF	Dredged Material Evaluation Framework	NOAEL	No Observed Adverse Effect Level
DNA	Deoxyribonucleic Acid	NODC	National Oceanographic Data Center
DNAPL	Dense Non-Aqueous Phase Liquid	NPDES	Natural Pollution Discharge Elimination System
DO	Dissolved Oxygen	NPL	National Priorities List
DQO	Data Quality Objective	NRDA	Natural Resource Damage Assessment
DSL	Oregon Division of State Lands	NWEA	Northwest Environmental Advocates
DWR	Department of Water Resources	OAR	Oregon Administrative Rules
ECSI	Environmental Cleanup Site Information Database	OCF	On-Site Containment Facility
EIS	Environmental Impact Statement	ODEQ	Oregon Department of Environmental Quality
EPA	U.S. Environmental Protection Agency	ODFW	Oregon Department of Fish and Wildlife
ERED	Environmental Residue-Effects Database	ODOT	Oregon Department of Transportation

ODWR	Oregon Department of Water Resources	RP	Responsible Party
ORS	Oregon Revised Statutes	SAM	Sediment Assessment Methodology
OSA	Orphan Site Account	SAP	Sampling and Analysis Plan
PA	Preliminary Assessment	SIMI	Similarity Index
PAH	Polycyclic Aromatic Hydrocarbon	SMP	Sediment Management Plan
PCB	Polychlorinated Biphenyl	SPI	Sediment Profile Imaging
PCDD	Polychlorinated Dibenzodioxin	SQG	Sediment Quality Guideline
PCDF	Polychlorinated Dibenzofuran	TAG	Technical Assistance Grant
PCP	Pentachlorophenol	TBT	Tributyltin
PDC	Portland Development Commission	TCA	Trichloroethane
PHSMP	Portland Harbor Sediment Management Plan	TCLP	Toxicity Characteristic Leaching Procedure
PPA	Prospective Purchaser Agreement	TEC	Trichloroethylene
PRP	Potentially Responsible Party	TEF	Technical Evaluation Framework
PSEP	Puget Sound Estuarine Protocol	TIE	Toxicity Identification Evaluation
PSY	Portland Ship Repair Yard	TMDL	Total Maximum Daily Load
QA/QC	Quality Assurance/Quality Control	TOC	Total Organic Compounds
OSA	Orphan Site Account	TPH	Total Petroleum Hydrocarbons
RAGS	Risk Assessment Guidance for Superfund	TPL	The Trust for Public Lands
RAO	Remedial Action Objective	TRV	Toxicity Reference Value
RCRA	Resource Conservation and Recovery Act	TSC	Tissue Screening Concentration
RD/RA	Remedial Design/Remedial Action	TSS	Total Suspended Solids
RDT	Regional Decision Team	TTL	Target Tissue Level
RfD	Reference Dose	USFWS	U.S. Fish and Wildlife Service
RI/FS	Remedial Investigation/Feasibility Study	USGS	U.S. Geological Survey
RM	River Mile	UST	Underground Storage Tank
RME	Reasonable Maximum Exposure	VCP	Voluntary Cleanup Program
ROD	Record of Decision	VOC	Volatile Organic Compound
		WRDA	Water Resources Development Act

Appendix F: Glossary of Terms

Applicable or Relevant and Appropriate Requirements (ARARs): Applicable requirements are those cleanup standards of control and other substantive environmental protection requirements, criteria or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, response action, location, or other circumstance at a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site. "Relevant and appropriate" requirements are those clean-up standards which, while not "applicable" at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well-suited to the particular site. ARARs can be action-specific, location-specific or chemical-specific.

Assessment Endpoint: In an ecological risk assessment, an explicit expression of the environmental value to be protected; includes both an ecological entity and specific attributed thereof entity (e.g., salmon are a valued ecological entity; reproduction and population maintenance – the attribute – form an assessment endpoint).

Background Level: The concentration of a substance in an environmental media (air, water or soil) that occurs naturally or is not the result of human activities.

Best Management Practices (BMPs): Methods determined to be the most effective, practical means of preventing or reducing pollution from nonpoint sources.

Bioaccumulation: The ratio of the concentration of a chemical in an organism to the concentration of the chemical in an ambient medium (usually water).

Bioconcentration: The ratio of the concentration of a chemical in an organism to the concentration of the chemical in the organism's food or water.

Brownfields: Abandoned, idled or underused industrial and commercial facilities where expansion

or redevelopment is complicated by real or perceived environmental contamination.

Carcinogens: Any substance that can cause or aggravate cancer.

Chemical of Interest: A hazardous substance identified as having the potential to pose a risk to human health or the environment.

Cleanup: Actions taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. Agencies often use the term broadly to describe various response actions or phases of remedial activities, such as an RI/FS. "Cleanup" is sometimes used interchangeably with the terms "remedial action," "remediation," "removal action," "response action" or "corrective action."

Cleanup Level: Residual concentration of a hazardous substance determined to be protective of public health, safety and welfare, and the environment under specified exposure conditions.

Community Advisory Group (CAG): A committee, task force or board made up of stakeholders affected by a Superfund or other hazardous waste site. A CAG provides a way for representatives of diverse community interests to present and discuss their needs and concerns related to the site and the site cleanup process. CAGs are a community initiative and responsibility. They function independently of the EPA.

Community Involvement Plan (CIP): A formal plan of communication and public participation activities developed by the EPA to ensure opportunities for community members to learn more about Superfund site activities and provide input to inform site decision-making. The plan is the result of information collected through community meetings and interviews and a review of site-related documents.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): This law, enacted by Congress on December 11, 1980, created the Superfund program. Specifically, CERCLA: (1) established prohibitions and requirements concerning closed and abandoned hazardous waste sites; (2) provided for liability of persons responsible for releases of hazardous waste at these sites; and (3) established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA was amended by the Superfund Amendments and Reauthorization Act of 1986.

Conceptual Model: A written description and illustration of predicted relationships between receptors (both human and ecological) and the hazardous substances they may be exposed to.

Consent Order: Legal vehicle to make sure cleanup moves forward at a contaminated site. It typically contains stipulated penalties for non-performance by the liable entity and cannot be terminated unilaterally.

Data Quality Objectives (DQOs): Qualitative and quantitative statements of the overall level of uncertainty that a decision-maker will accept in results or decisions based on environmental data. These provide the statistical framework for planning and managing environmental data operations consistent with user's needs.

Ecological Risk Assessment: The process for evaluating how likely it is that the environment may be impacted because of exposure to one or more environmental stressors such as contaminants and hazardous wastes.

Endangered Species Act (ESA): Federal statute enacted in 1973 to conserve species and ecosystems. Species facing possible extinction are listed as "threatened" or "endangered" or as "candidate" species for such listings. Following such a listing, recovery and conservation plans are put in place to protect the species and its habitat.

Environment: The sum of all external conditions affecting the life, development and survival of an organism.

Environmental Cleanup Law: Oregon's revised cleanup law, enacted in 1995, which expanded ODEQ's authority related to the identification, investigation and cleanup of hazardous substances.

Environmental Protection Agency (EPA): Federal agency whose mission is to protect human health and safeguard the environment.

Feasibility Study: An assessment of cleanup alternatives. A feasibility study, or FS, takes place if the risk assessment performed during a remedial investigation establishes the presence of unacceptable risks. During an FS, EPA screens and evaluates alternatives to clean up a site based on nine evaluative criteria, including effectiveness, cost and community acceptance.

Hazard Index: If a person is exposed to more than one chemical, a screening-level estimate of the total non-cancer risk is derived simply by summing the HQ values for that individual. This total is referred to as the Hazard Index, or HI.

Hazard Ranking System: The principal mechanism the EPA uses to place uncontrolled waste sites on the National Priorities List. The numerically based screening system uses information from initial, limited investigations to assess the relative potential of sites to pose a threat to human health or the environment.

Hazardous Waste: Solid wastes that possess at least one of four characteristics (ignitability, corrosivity, reactivity or toxicity), appear on special EPA lists, or are defined as hazardous by Oregon rules and statutes.

Hot Spots: Localized areas with unacceptably high levels of contamination.

Human Health Risk Assessment: The process to estimate the nature and probability of adverse health effects in humans who may be exposed to chemicals in contaminated environmental media, now or in the future.

Institutional Control: Non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is the EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that ground water will be returned to its beneficial use whenever practicable, institutional controls play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Joint and Several Liability: Under CERCLA, this legal concept relates to the liability for Superfund site cleanup and other costs on the part of more than one potentially responsible party (i.e., if there were several owners or users of a site that became contaminated over the years, they could all be considered potentially liable for cleaning up the site).

National Contingency Plan (NCP): The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly known as the National Contingency Plan, or NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases.

National Priorities List (NPL): The EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup under Superfund. The list is based primarily on the score a site receives from the Hazard Ranking System. The EPA is required to update the NPL at least once a year.

No Further Action (NFA): A determination by ODEQ following a preliminary assessment, risk assessment or completion of remedial action that no unacceptable risks to human health or to the environment remain.

Noncarcinogen: Hazardous substance with adverse health effects other than cancer on humans.

ODEQ: State agency whose job is to protect the quality of Oregon's Environment. ODEQ is responsible for protecting and enhancing Oregon's water and air quality, for cleaning up spills and releases of hazardous materials, and for managing the proper disposal of hazardous and solid wastes.

Orphan Site Account (OSA): Account used to fund investigation and remedial actions where liable parties are unknown, unwilling or unable to participate. ODEQ uses litigation to recover OSA funds from recalcitrant responsible parties.

Potentially Responsible Party: An individual, company, government agency or other entity (such as owners, operators, transporters or generators of hazardous waste) potentially responsible for, or contributing to, contamination at a Superfund site. Whenever possible, the EPA requires a PRP, through administrative and legal actions, to clean up hazardous waste sites it has contaminated.

Preliminary Assessment (PA): An assessment of information about a site and its surrounding area. A preliminary assessment determines whether a site poses little or no threat to human health and the environment or if it does pose a threat, whether the threat requires further investigation.

Proposed Plan: A plan for a site's cleanup that is available to the public for review and comment.

Public Availability Session: Informal public sessions that often use poster displays and fact sheets and that include EPA staff and contractors who are available to discuss issues and answer questions. Public availability sessions offer the public the opportunity to learn about project-related issues and to interact with EPA staff on a one-to-one basis.

Public Comment Period: A formal opportunity for community members to review and contribute written comments on various EPA documents or actions.

Public Meeting: Formal public sessions characterized by a presentation to the public followed by a question-and-answer session. Formal public meetings may involve the use of a court reporter and the issuance of transcripts. Formal public meetings are required only for the Proposed Plan and ROD amendments at a site.

Record of Decision (ROD): The public document issued by the EPA that explains the cleanup alternatives selected to clean up a Superfund site.

Release: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment, including the abandonment or discarding of barrels, containers and other closed receptacles containing any hazardous substance, or any threat thereof, but excluding exposures within a workplace, emissions from the engine exhaust, nuclear material and the normal application of fertilizer.

Remedial Alternative: An action considered in the feasibility study intended to reduce or eliminate unacceptable risks to human health and the environment at a site. The feasibility study considers a range of remedial alternatives. A site's Record of Decision documents the selection of a specific remedial alternative over other alternatives.

Remedial Action: The selected remedial alternative documented in a site's Record of Decision.

Remedial Investigation (RI): The first of the two-part site study known as a remedial investigation/feasibility study. The remedial investigation involves collecting and analyzing information about a site to determine the nature and extent of contamination that may be present. The risk assessment, conducted with the remedial investigation, determines how conditions at a site may affect human health or the environment.

Remediation: The removal of pollution or contaminants from land, water and air to protect human health and the environment. Also see *cleanup*.

Removal Action: Short-term immediate action that addresses releases of hazardous substances that require expedited responses. It may take place at any point in the site response process, and may include source control measures, removal of highly contaminated material, and/or posting warning signs or constructing fences around a contaminated site.

Risk: Probability that a hazardous substance, when released into the environment, will cause adverse effects in exposed humans or ecological receptors.

Risk Assessment: The process of evaluating whether a hazardous substance poses a potential threat to human health and the environment, either now or in the future.

Sediment: Soils, sand, organic matter or minerals that accumulate on the bottom of a water body.

Site Assessment: Process to evaluate potential or confirmed releases of hazardous substances that may pose a threat to human health or the environment. Criteria established under the Hazard Ranking System guide the process, which EPA, state, tribal or other federal agency environmental programs carry out.

Site Discovery: Process of identifying and documenting a release of hazardous substance to the environment.

Site-Specific Assessment: A remedial investigation conducted under the jurisdiction of Oregon's environmental cleanup statutes and rules.

Subsistence Fishing: People who obtain a significant portion of their dietary protein from eating self-caught fish of various species.

Superfund: The program operated under the legislative authority of CERCLA that funds and carries out EPA solid waste emergency and long-term removal and remedial activities. These activities

include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions. Superfund is the common name for CERCLA. People often use the term as an adjective for hazardous waste sites and the investigation and cleanup process directed by the EPA.

Tissue Screening Concentrations (TSCs):

Contaminant concentration in fish tissue below which adverse effects are not expected for 95 percent of the fish species.

Target Tissue Levels (TTLs): A tissue concentration in food items (e.g., fish or shellfish) that does not pose an unacceptable risk to birds, mammals, or humans that consume these food items.

Voluntary Cleanup Agreement: Legal agreement to ensure cleanup moves forward at a contaminated site; entered into voluntarily by site owners, enforceable by administrative penalties or court action.

Willamette River: The 187-mile long waterway in northwest Oregon that flows northward between the coast and the Cascade Mountains.

Glossary terms are from the EPA's Terminology Services Web page

(iaspub.epa.gov/sor_internet/registry/termreg/home/overview/home.do), CERCLA and NCP guidance, and the Oregon Administrative Rules.

Appendix G: Additional Information Resources

Agency Websites

EPA Region 10: www.epa.gov/region10/portlandharbor

ODEQ: www.deq.state.or.us/lq/cu/nwr/portlandharbor

Portland Harbor Fact Sheets (EPA Web page or upon request)

Proposed Confined Disposal Facility Questions and Answers – January 2013

Feasibility Study and Sitewide Status Update – April 2012

Human Health Risk Assessment Overview – February 2009

Reports and Other Materials of Interest (EPA Web page or upon request)

Draft Feasibility Study

Draft Human Health Risk Assessment

Draft Ecological Risk Assessment

Early Action Cleanup Area updates

Other Community Resources

Portland Harbor Community Advisory Group: www.portlandharborcag.info

Willamette Riverkeeper (technical assistance grantee):

www.willamette-riverkeeper.org/WRK/index.html

Natural Resource Trustee Council: www.fws.gov/oregonfwo/Contaminants/PortlandHarbor

Lower Willamette Group (LWG): lwgportlandharbor.org

EPA and ODEQ Contacts

General Questions

- Alanna Conley, EPA Community Involvement Contact: (503) 326-6831 | conley.alanna@epa.gov
- Marcia Danab, ODEQ Community Involvement Contact: (503) 229-6488 | danab.marcia@deq.state.or.us

Technical Questions

- Kristine Koch, EPA Project Manager: (206) 553-6705 | koch.kristine@epa.gov
- Matt McClincy, ODEQ Project Manager: (503) 229-6825 | mcclincy.matt@deq.state.or.us

En Español: Si desea hablar con alguien que habla español, llame a Michael Ortiz (ortiz.michael@epa.gov) | (206) 553-6234.

Request copies of EPA records using

FOIAonline: yosemite.epa.gov/r10/extaff.nsf/FOIA+pages/freedom+of+information+act.

Region 10 Regional Public Liaison: A facilitator between citizens and EPA staff who can help solve site-related problems and communication issues. Contact Suzanne Powers (powers.suzanne@epa.gov) at (360) 753-9475.

Environmental justice – The EPA's goal is to provide an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn and work. Contact our environmental justice staff for more information and resources: yosemite.epa.gov/r10/ocrej.nsf/Environmental+Justice/EJ-Contacts.